

AMENDMENTS TO THE CLAIMS

1-50. (Canceled)

51. (New) An antenna system, comprising:

    a first multi-layer structure, having multiple antenna elements disposed thereon;

    at least a second multi-layer structure, which is mounted below the first multi-layer structure, and which comprises electronic components for processing Radio Frequency (RF) signals received by the antenna elements; and

    multiple RF transitions, which are mounted between the first and second multi-layer structures and are operative to transfer the RF signals from the first multi-layer structure for processing by the electronic components in the second multi-layer structure.

52. (New) The system according to claim 51, wherein the first and second multi-layer structures comprise multi-layer Printed Circuit Boards (PCBs).

53. (New) The system according to claim 51, wherein the antenna elements are tilted with respect to a plane of the first multi-layer structure.

54. (New) The system according to claim 51, wherein the RF transitions comprise coaxial transitions.

55. (New) The system according to claim 51, wherein the antenna elements comprise microstrip elements that are disposed in respective recesses in a top surface of the first multi-layer structure.

56. (New) The system according to claim 51, wherein the electronic components are arranged to apply phase shifting, amplification and combining to the RF signals.

57. (New) The system according to claim 56, wherein the electronic components are arranged to electronically steer

a beam pattern formed by the antenna elements in an elevation plane by applying the phase shifting, amplification and combining, and comprising a mechanical rotation subsystem, which is arranged to rotate the first and second multi-layer structures in an azimuth plane.